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EXAMINER

PIZIALI, ANDREW T

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/740,261  
Filing Date: December 18, 2003  
Appellant(s): POLAT ET AL.

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Brant Cook  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6/14/2010 appealing from the Office action mailed 1/27/2010.

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**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application: Claims 1-5, 8-15 and 18-20.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

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**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejections listed below:

**WITHDRAWN REJECTIONS**

The examiner withdraws the rejections in view of USPN 5,328,565 to Rasch.

**(7) Claims Appendix**

The examiner has no comment on the claims contained in the Appendix to the brief.

**(8) Evidence Relied Upon**

5,538,595	TROKHAN	7-1996
2,113,431	MILLIKEN	1-1937
3,034,180	GREINER	9-1959
5,245,025	TROKHAN	9-1993
5,409,572	KERSHAW	4-1995
6,548,731	MIZUTANI	4-2003
4,202,959	HENBEST	5-1980
5,405,499	VINSON	4-1995
WO 93/14267	MANNING	7-1993

## **(9) Grounds of Rejection**

The following grounds of rejection are applicable to the appealed claims:

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 5 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan.**

Trokhan discloses a fibrous tissue structure that can comprise two superposed layers wherein one layer comprises a randomly distributed long softwood fibers and the other layer comprises short hardwood fibers (see entire document including column 13, lines 25-42).

Trokhan discloses that synthetic fibers may be present in the layers (column 6, lines 47-51).

Trokhan does not appear to specifically mention the short fiber layer being disposed in a non-random pattern of regions of different basis weight comprising void regions, but each of the secondary references discloses that it is known in the tissue art to form a tissue with a non-random pattern of regions of different basis weight comprising void regions. It is noted that although only the short fiber layer requires the non-random pattern of regions of different basis weight comprising void regions, the claims do not exclude the entire structure from including the non-random pattern of regions of different basis weight comprising void regions.

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Milliken discloses that it is known in the tissue art to form a tissue product (1) with apertures (2) to effectively remove face cream without irritating skin (column 1, lines 14-21, column 2, lines 1-32, and Figures 1 and 2). Since material is not present within the aperture regions, and since the aperture regions are non-randomly patterned (lined up in rows, see Figure 1), the tissue product comprises a non-random pattern of regions of different basis weight comprising (higher basis weight) fibrous regions and (lower basis weight) void regions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the tissue of Trokhan with apertures, as taught by Milliken, motivated by a desire to form a tissue with improved face cream removal ability.

Unlike the tissue of Milliken comprising only two regions of different basis weight, Greiner discloses that it is known in the tissue art to produce a soft and attractive tissue (column 1, lines 15-22) comprising three regions of different basis weight. Greiner discloses that it is known in the tissue art to produce a tissue with a forming wire (24) possessing cones (34) wherein the deposited fibers are directed by the walls of the cones to a position at the bases thereof with the result that a substantial portion of said fibers assume a position of rest on the wire which is adjacent to the cones at their bases (see entire document including column 2, lines 50-66). The result is a tissue comprising three regions of different basis weight: a) high basis weight regions adjacent to the cones, b) medium basis weight regions spaced away from the cone areas, and c) low basis weight aperture regions. The regions are clearly not randomly patterned because the cones are lined up in rows (see Figure 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the tissue of Trokhan with

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three regions of different basis weight, as taught by Greiner, motivated by a desire to produce a soft and attractive tissue.

Like Greiner, Trokhan '025 discloses that it is known in the tissue art to produce a tissue comprising three regions of different basis weight disposed in a non-random pattern (see entire document including column 4, lines 52-68). Trokhan '025 discloses that the tissue may comprise apertures and that the apertures represent regions of low (zero) basis weight (column 10, lines 15-28). Trokhan '025 discloses that the structure is produced via a forming belt possessing different flow resistance areas (column 4, lines 21-31) and that the belt provides increased opacity, increased absorbency, and increased burst strength (paragraph bridging columns 2 and 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the tissue of Trokhan with three regions of different basis weight, as taught by Trokhan '025, motivated by a desire to produce a tissue with increased opacity, increased absorbency, and/or increased burst strength compared.

Regarding claim 5, Trokhan discloses that the short cellulosic fibers are hardwood fibers (column 6, lines 19-68, column 12, lines 31-65, and column 13, lines 25-67).

Regarding claim 18, Trokhan discloses that the fibrous structure may be creped, uncreped or embossed (column 6, lines 32-37 and column 9, lines 48-58).

Regarding claim 19, Trokhan discloses that the fibrous structure may be combined with a separate structure to form a multi-ply article (column 6, lines 32-37 and column 13, line 60 through column 14, line 33).

Regarding claim 20, Trokhan discloses that a latex may be disposed on at least a portion of the unitary structure (column 10, lines 5-21).

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**3. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of USPN 6,548,731 to Mizutani.**

Trokhan is silent with regards to a specific fiber length ratio between the synthetic fibers and the short fibers, therefore, it would have been necessary and thus obvious to look to the prior art for conventional ratios. Mizutani provides this conventional teaching showing that it is known in the absorbent product art to use cellulosic fibers that are shorter than the synthetic fibers resulting in an absorbent article that passes a large amount of liquid so as to keep the surface dry while not having a wet feel (see entire document including column 1, lines 9-15). Mizutani mentions a synthetic fiber to short fiber ratio of between about 1 and about 13 (column 4, lines 50-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the mixture with a synthetic fiber to short fiber ratio of 1 to 13, because the absorbent article would pass a large amount of liquid thus keeping the surface dry while not having a wet feel, and motivated by the expectation of successfully practicing the invention of Trokhan.



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**4. Claims 4, 8-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of WO 93/14267 to Manning.**

Regarding claim 4, Trokhan is silent with regards to a PTP factor (diameter ratio) between the synthetic fibers and the short fibers, therefore, it would have been necessary and thus obvious to look to the prior art for conventional PTP factors. Manning provides this conventional teaching showing that it is known in the cellulosic and synthetic fiber mixture art to use synthetic and cellulosic fibers with a PTP factor of greater than about 0.75. Manning mentions synthetic fibers with a diameter of about 0.5 to 15 denier and cellulosic fibers with a diameter of 1 to 30 denier (see entire document including page 7, lines 8-24 and page 8, lines 1-15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a PTP factor of greater than about 0.75, motivated by the expectation of successfully practicing the invention of Trokhan.

Regarding claim 8, Trokhan discloses that the short cellulosic fibers may have a length weighted average fiber length of less than about 1 mm (column 13, lines 25-42), but Trokhan does not mention an average cellulosic fiber width. Trokhan is silent with regards to an average cellulosic fiber width, therefore, it would have been necessary and thus obvious to look to the prior art for conventional cellulosic fiber widths. Manning provides this conventional teaching showing that it is known in the art to use cellulosic fibers with an average fiber width of less than about 18 micrometers (see entire document including page 7, lines 8-24). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

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make the short cellulosic fibers with an average fiber width of less than about 18 micrometers motivated by the expectation of successfully practicing the invention of Trokhan.

Regarding claim 9, Trokhan is silent with regards to the synthetic fiber diameter and length, therefore, it would have been necessary and thus obvious to look to the prior art for conventional synthetic fiber diameters and lengths. Manning provides this conventional teaching showing that it is known in the absorbent product art to use synthetic fibers with a length weighted average fiber length of more than about 2 mm and a diameter of more than about 15 micrometers (page 7, lines 8-24). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use synthetic fibers with a length weighted average fiber length of more than about 2 mm and a diameter of more than about 15 micrometers, motivated by the expectation of successfully practicing the invention of Trokhan.

Regarding claim 10, Trokhan discloses that the long cellulosic fibers may have a length weighted average fiber length of greater than about 2 mm (column 13, lines 25-42), but Trokhan does not mention the average cellulosic fiber width. Trokhan is silent with regards to specific cellulosic fiber widths, therefore, it would have been necessary and thus obvious to look to the prior art for conventional widths. Manning provides this conventional teaching showing that it is known in the art to use cellulosic fibers with an average fiber width of less than 50 micrometers (see entire document including page 7, lines 8-24). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the long cellulosic fibers with an average fiber width of less than 50 micrometers motivated by the expectation of successfully practicing the invention of Trokhan.

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Regarding claims 11 and 12, Trokhan discloses that synthetic fibers may be utilized in combination with the cellulosic fibers, but Trokhan does not specifically mention bicomponent synthetic fibers. Manning discloses that it is known in the art to use bicomponent synthetic fibers to improve adhesion between fibers (see page 6, lines 11-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the synthetic fibers in any suitable known fiber configuration, such a bicomponent fiber configuration, as taught by Manning, because bicomponent fibers improve adhesion between the fibers and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 12, Manning discloses that the bicomponent fibers may be polyester and/or polyolefin based (see page 7, lines 6-15).

Regarding claim 15, Manning discloses that the bicomponent fibers are heat fused to adhere the fibers (see page 8, line 17 to page 9, line 9).

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**5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of USPN 4,202,959 to Henbest.**

Trokhan is silent with regards to the synthetic fiber diameter and length, therefore, it would have been necessary and thus obvious to look to the prior art for conventional synthetic fiber diameters and lengths. Henbest provides this conventional teaching showing that it is known in the art to use synthetic fibers with a length weighted average fiber length of more than about 2 mm with an average fiber width of not more than 25 mm (see entire document including column 2, lines 13-38). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use synthetic fibers with a length weighted average fiber length of more than about 2 mm and a diameter of more than about 15 micrometers, as taught by Henbest, motivated by the expectation of successfully practicing the invention of Trokhan.

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**6. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of any one of USPN 5,405,499 to Vinson or USPN 5,409,572 to Kershaw.**

Trokhan is silent with regards to specific coarseness values, therefore, it would have been necessary and thus obvious to look to the prior art for conventional coarseness values. Vinson and Kershaw each provide this conventional teaching showing that it is known in the art to use a low coarseness, such as less than about 25mg/100m, because the softness of the product relates to the coarseness and a softer product is desired (see entire documents including column 1, lines 24-60 of Vinson and column 3, line 65 through column 4, line 31 of Kershaw). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the mixture of short cellulosic fibers and synthetic fibers with a coarseness value of less than about 25mg/100m motivated by the expectation of successfully practicing the invention of Trokhan.

**(10) Response to Argument**

Claims 1, 5 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan.

The appellant asserts that Milliken, Greiner, and Trokhan '025 each fail to teach or suggest a tissue with regions of different basis weight because the appellant contends that it is improper to consider apertures to be layer regions of low (zero) basis weight. Appellant's argument is not persuasive for a plurality of reasons.

Firstly, Trokhan '025 specifically discloses that it is known in the tissue art that an aperture region is considered a low (zero) basis weight region of the layer (column 2, lines 23-34 and column 10, lines 15-28). Therefore, it is clear that in the tissue art that an aperture is considered a layer region of low (zero) basis weight.

Secondly, even assuming *arguendo*, that an aperture region cannot be considered a layer region of low (zero) basis weight, Greiner and Trokhan '025 each disclose that it is known in the tissue art to produce a tissue comprising three regions of different basis weight disposed in a non-random pattern (see entire document including column 4, lines 52-68). Unlike Milliken wherein the only low basis weight regions are the aperture regions, Greiner and Trokhan '025 each disclose that it is known in the tissue art to produce a tissue product with low (zero) basis weight aperture regions and two other regions of different basis weight. Therefore, not even considering the disclosure of apertures, Greiner and Trokhan '025 each discloses that it is known in the tissue art to form a tissue with a non-random pattern of regions of different basis weight.

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Thirdly, the current claims require “a non-random pattern of regions of different basis weight.” The current specification only specifically references regions of different basis weight on page 10, last line, wherein it is disclosed that the current invention may include micro-regions of different basis weight. It is noted that said passage does NOT mention the micro-regions of different basis weight being in a non-random pattern. Therefore, said passage does not provide written support for the claim limitation. The examiner did not make a 35 U.S.C. 112, first paragraph, new matter rejection simply because page 18, lines 27-29 of the current specification discloses that the fiber mixture may be distributed in a non-random pattern comprising void regions (see Figure 10). The examiner interpreted the void regions of the non-random pattern to be regions of low (zero) basis weight different than the basis weight of the non-void regions. Therefore, either a) void regions are not considered layer regions of low (zero) basis weight and the current specification does not provide written support for the claimed subject matter or b) void regions are considered layer regions of low (zero) basis weight and the prior art teaches the claim limitations.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of USPN 6,548,731 to Mizutani.

Appellant fails to separately argue the claims.

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Claims 4, 8-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of WO 93/14267 to Manning.

Appellant fails to separately argue the claims.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of USPN 4,202,959 to Henbest.

Appellant fails to separately argue the claim.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,538,595 to Trokhan in view of any one of USPN 2,113,431 to Milliken, USPN 3,034,180 to Greiner, or USPN 5,245,025 to Trokhan as applied to claims 1, 5 and 18-20 above, and further in view of any one of USPN 5,405,499 to Vinson or USPN 5,409,572 to Kershaw.

Appellant fails to separately argue the claims.



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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Andrew T Piziali/  
Primary Examiner, Art Unit 1786

Conferees:

/D. Lawrence Tarazano/  
Supervisory Patent Examiner, Art Unit 1786

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